

**REMARKS**

Applicant thanks the Examiner for the thorough consideration given the present application.

Claims 1-4 and 6-35 are pending, of which claims 1, 13, 17, 23, and 27 are independent.

Claim 1 is amended to include the subject matter of claim 5, which is cancelled. In addition, claims 1, 7, and 12-33 are amended for clarity, correct punctuation, and proper antecedent basis. Claims 34 and 35 are added to provide Applicant with the protection to which he is deemed entitled.

Contrary to the assertion in the Office Action, Joffe et al. (U.S. 5,856,758) does not anticipate the subject matter of claims 1-33 under 35 U.S.C. §102(b).

Amended independent claim 1 is not anticipated by Joffe because it requires voltage dividers for the first and second feedback loops to be the same. In Joffe, the voltage dividers of the first and second loops are not the same because resistor 35 cannot have the same value as resistor 34. In order for resistor 35 to have the same value as resistor 34,  $k$  must equal 1. However, if  $k$  equals 1,  $m$  has a value of infinity, and load resistor  $R_t$  has a value of 0. Clearly, this is impossible. Consequently, amended independent claim 1 is not anticipated by Joffe.

Claim 10 is also not anticipated by Joffe, because Joffe has no disclosure of signal generator 40 applying a ramp signal for gradually reducing the output signal supplied to load 45.

Claim 11 is also not anticipated by Joffe, because Joffe has no disclosure of load 45 being a laser. As discussed in the "Background of the Invention," Joffe is used with two wire, twisted subscriber loop pairs. There is no mention of load 45 being a laser.

Claim 13 is not anticipated by Joffe because Joffe has no disclosure of voltage dividers comprising resistors 31-35 having voltage division factors and sensing resistor 33 having a value for causing the current flowing through output terminal 43 to load 45 being directly proportional to the difference in the voltages at the circuit input terminal, i.e., the voltage of source 40 and the further terminal, the grounded terminal connected to resistor 31, wherein the resistance of the first voltage divider between the output and first input terminals of the amplifier 20 and the resistance of the second voltage divider between the circuit output terminal 43 and the second input terminal, at the non-inverting input of amplifier 20, being on the same order of magnitude and much greater than the resistance of sensor resistance 33. Applicant requests an explanation of the basis for the statements in the Office Action regarding the relative values of the resistances.

Claim 16 is not anticipated by Joffe. The Office Action alleges resistor 135 (FIG. 6) is a bias source that is connected to a laser diode and to circuit output terminal 43. However, Joffe does not disclose a laser diode, and resistor 135 is connected to the non-inverting input terminal of amplifier 20.

Joffe does not anticipate claim 17 because there is no disclosure in Joffe of the voltage dividers including resistors 31-35 having voltage division factors and sensing resistor 33 having a value for causing current flowing through load 45 to have a value directly proportional to the differences in the voltage at the left terminals of resistors 31 and 32. In claim 17, the first and second input terminals of the amplifier arrangement to be respectively the non-inverting and inverting amplifier arrangement input terminals. In Joffe, the situation is reversed because resistor 34 is connected between output terminal 23 of amplifier 20 through feedback resistor 34 to inverting terminal 21, while circuit output terminal 43 is connected through feedback resistor 35 to non-inverting terminal 22.

Claim 19 is not anticipated by Joffe. Joffe does not disclose input terminals 21 and 22 of amplifier 20 being connected to first and second voltage sources, which are not required to be first and second non-zero voltage sources. In Joffe, inverting input terminal 21 is always connected to ground through resistor 31 (FIGS. 2, 5, and 6). Alternatively, non-inverting input terminal 22 of amplifier 20 (Fig. 7) is connected to ground.

Claims 21 and 23 are not anticipated because Joffe does not disclose a laser diode or a non-grounded terminal of a DC voltage source having a polarity in combination with a laser diode polarity, such that DC current flows between the DC voltage source ungrounded terminal and the circuit output terminal via the laser diode.

The anticipation rejection of claim 27 is incorrect, *inter alia*, because of the requirement for the resistance of the first voltage divider between the output terminal of the amplifier arrangement and the first input terminal of the amplifier arrangement to be matched in magnitude to the resistance to the second voltage divider between the circuit output terminal and the second terminal of the amplifier arrangement. In Joffe, resistors 34 and 35 cannot have matched values because  $k$  cannot have a value of 1. If  $k$  had a value of 1,  $m$  would equal infinity.

Added claims 34 and 35 depend respectively on claims 23 and 32 and require the connection from the output terminal of the amplifier arrangement to be connected through a feedback loop to the non-inverting input terminal of the amplifier arrangement and the output terminal of the circuit to be connected to the inverting input terminal of the amplifier arrangement through a different feedback loop. These connections are the opposite of those disclosed by Joffe.

In view of the foregoing, favorable reconsideration and allowance are in order, and such action is respectfully requested.

To the extent necessary, Applicant hereby requests any required extension of time not otherwise requested and hereby authorizes the Commissioner to charge any prescribed fees not otherwise provided for, including application processing, extension, and extra claims fees, to Deposit Account No. 07-1337.

Respectfully submitted,

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